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EXAMINER
NGUYEN, DUC M

ART UNIT	PAPER NUMBER
2685	12

DATE MAILED: 09/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/746,918	Parupudi et al
Examiner	**Art Unit**
Duc M. Nguyen	2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Jul 7, 2003*.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *2-27, 29-48, and 50-58* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *2-27, 29-48, and 50-58* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). *9 & 1*
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

This action is in response to applicant's response filed on 7/7/03. Claims 2-27, 29-48, 50-58 are now pending in the present application. **This action is made final.**

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims **2-3, 5-9, 11, 13-16, 24-27, 29-30, 54-55, 57** are rejected under 35 U.S.C. 102(a) as being anticipated by **Te-eni** (PCT Pu. Number **WO 99/55102**).

Regarding claim **5, Te-eni** discloses a mobile terminal (cellular phone) capable of executing location-related services such as phone settings based on different environments such as hospital airplane (see **col. 3, line 22 - col. 4, line 14**), whereas an application interface (operating software) is configured to wirelessly receive information (commands such as speaker

mute, MS shutdown, etc...) that is associated with the phone's context (see **col. 21, lines 1-4**), which would include all the claimed limitations.

Regarding claims **2-3, 6-9, 11, 13-16, 24-27, 29-30, 54-55, 57,** they are rejected for the same reason as set forth in claim **5** above. In addition, **Te-eni** discloses

- configured to receive multiple different context providers (i.e, hospital, airplane, cinema halls, see col. 3, lines 22-28);

- set phone on or off (MS shut down, see col. 21, lines 1-4);

- sound or vibration would read on "ringer mode on/off" (see col. 21, lines 1-4);

- computer-readable media (inherently for a mobile phone with a CPU);

- change behavior when no longer at the current location (inherently feature in order to utilize such location-based services);

- call forwarding behavior (see mailbox, col. 21, lines 8-9 and col. 14, line s 13-15);

- information pertains to a user of the cellular phone (see Table 1, and col. 13, line 22 - col. 14, line 6).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims **17-19, 21-23, 58** are rejected under 35 U.S.C. 103(a) as being unpatentable by **Te-eni** in view of **Kuwahara et al** (US Patent Number **6,389,288**).

Regarding claim **17,** it is rejected for the same reason as set forth in claim **5** above. In addition, since a mobile phone that uses different methods for obtaining accuracy of location information is known in the art as disclosed by **Kuwahara** (see Boolean operation result of the combination means in **col. 8, lines 1-28**), and since **Te-eni** also suggests different methods are used for obtaining accuracy of location information (see **col. 10, line 27 - col. 12, line 1**), it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of **Kuwahara** to **Te-eni** for the mobile phone to use different form of location information for ascertain its location, for improving location information accuracy.

Regarding claims **18-19, 21-23,** they are rejected for the same reason as set forth in claim **5** above. In addition, **Te-eni** discloses

- phone on or off (MS shut down, see col. 21, lines 1-4);

- sound or vibration would read on "ringer mode on/off" (see col. 21, lines 1-4);

- computer-readable media (inherently for a mobile phone with a CPU);

- change behavior when no longer at the current location (inherently feature in order to utilize such location-based services);

- call forwarding behavior (see mailbox, col. 21, lines 8-9 and col. 14, line s 13-15);

- information pertains to a user of the cellular phone (see Table 1, and col. 13, line 22 - col. 14, line 6).

Regarding claim **58,** it is rejected for the same reason as set forth in claim **17** above.

5. Claims **10, 12, 20** are rejected under 35 U.S.C. 103(a) as being unpatentable by **Te-eni** in view of **Finke-Anlauff** (US Patent Number **5,479,476**).

Regarding claim **10, Te-eni** discloses all the claimed limitations, see claim **5** above, except for clearly disclosing the pitch of a ringer. However, **Finke-Anlauff** discloses phone settings for different locations wherein the pitches of a ringer are set according to locations (see Fig. 3). Since **Te-eni** discloses different phone settings at different locations, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of **Finke-Anlauff** to **Te-eni** for setting the pitches of a ringer at different locations as well, for audibly alerting a user of an incoming call at the best performance for each environment within which it is placed.

Regarding claim **12, Te-eni** discloses all the claimed limitations, see claim **5** above, except for the step of using phone settings that are resident on the cellular phone to modify the setting. However, when a phone setting is switched from ring to vibration mode or from vibration to ring mode depending on the user location, it would have been obvious that such mode of settings (i.e, the ring volume or the vibration frequency) are resided in the phone as disclosed by **Finke-Anlauff** (see Fig. 3). Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to provide the above teaching of **Finke-Anlauff** to **Te-eni** for setting ring volume or the vibration frequency at the phone in advance, so that such setting would be utilized upon executing an alerting mode when receiving a command from the local management (see **Te-eni**, col. 21, lines 1-4).

Regarding claim **20,** the claim is rejected for the same reason as set forth in claims **10, 17** above.

6. Claim **36, 41, 42** is rejected under 35 U.S.C. 103(a) as being unpatentable by **Kovac et al** ("Adaptive Mobile Access to Context-aware Service", IEEE 1999, pp. 190-201).

Regarding claim **36, 41, 42, Kovac** discloses a method for mobile access to context-aware services (see pp. 190-201), wherein based on location awareness information, the behavior of a mobile's user's preferences is modified (i.e, phone setting) depend on environments (read on class types such as hospital, theater) at certain locations (see col. 2 of page 190 on silent vibration in a concert), and user profile (see section 3.3 Customizable Application, page 192). Since each class (or environments such as hospital or theater) would obviously comprise attributes (i.e, call alerting modes or phone settings) in order to modify behaviors of a mobile device according to the location-awareness as mention above, the claimed limitation are made obvious by **Kovac**, for defining a context-information **pertaining** to classes and attributed as claimed, in order to modify the behavior of a mobile device according to its location at certain environment.

7. Claim **31-33, 35, 37-38, 40, 43-47** are rejected under 35 U.S.C. 103(a) as being unpatentable by **Kovac** in view of **Te-eni**.

Regarding claim **31, Kovac** discloses all the claimed limitations, see claim **36** above, except for clearly disclosing one or more transmitter at the location where a particular phone behavior is desired. However, in an analogous art, **Te-eni** discloses such the above limitation for changing the behavior of the cellular phone in regulated areas (see Front end in Figs. 2-3). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of **Te-eni** to **Kovac** for placing one or more transmitter at the location as claimed, in order to restrict communication usage in regulated areas.

Regarding claims **32-33, 35, 37-38, 40, 43-47**, the claims are rejected for the same reason as set forth in claim **31** above. In addition, **Te-eni** further discloses features which

- set phone on or off (MS shut down, see col. 21, lines 1-4);

- switching to sound or vibration mode which would read on "ringer mode on/off" (see col. 21, lines 1-4);

- change behavior when no longer at the current location (inherently feature in order to utilize such location-based services);

- comprise call forwarding behavior (see mailbox, col. 21, lines 8-9 and col. 14, line s 13-15);

- comprise information pertains to a user of the cellular phone (see Table 1, and col. 13, line 22 - col. 14, line 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further incorporating the above teaching of **Te-eni** to **Kovac** for providing features as claimed, so that the location-based service can be effectively utilized.

8. Claims **34, 39** are rejected under 35 U.S.C. 103(a) as being unpatentable by **Kovac** in view of **Te-eni** and further in view of **Finke-Anlauff**.

Regarding claims **34, 39, Te-eni** discloses all the claimed limitations, see claim **31** above, except for clearly disclosing the pitch of a ringer. However, **Finke-Anlauff** discloses phone settings for different locations wherein the pitches of a ringer are set according to locations (see Fig. 3). Since **Te-eni** discloses different phone settings at different locations, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of **Finke-Anlauff** to **Te-eni** for setting the pitches of a ringer at different locations as well, for audibly alerting a user of an incoming call at the best performance for each environment within which it is placed.

9. Claims **48, 50** are rejected under 35 U.S.C. 103(a) as being unpatentable by **Kuwahara et al** (US Patent Number **6,389,288**).

Regarding claim **48, Kuwahara** discloses a mobile terminal (cellular phone) capable of executing location-related services such as phone settings, call settings (see Figs. 1, 13, and col. 9, line 59 - col. 10, line 40). Here, it would have been obvious that when setting call incoming

alert modes based on the reported location (see **col. 10, lines 36-40**), only reported location and on-board components (i.e, refs. 1-10 in Fig. 1) are used for adjusting phone setting. Therefore, the claimed limitations are made obvious by **Kuwahara** for using only reported location and on-board components for adjusting phone setting, for setting call incoming alert modes only.

Regarding claim **50, Kuwahara** discloses a method for determining whether the reported location of a mobile phone is matched with a user-defined area vector name in order to execute a service setting for such user-defined area. Here, since each user-defined area comprises a plurality of zones (see Fig. 21), hence, when receiving the reported location of a zone, it would have been obvious to one of ordinary skill in the art to use a hierarchical traversable tree structure in order to traverse from the reported location of the zone area to get the corresponding user-defined area vector name. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Kuwahara** for using a hierarchical traversable tree structure as claimed, in order to obtain the corresponding user-defined area effectively from the reported location.

10. Claims **4, 51- 53, 56,** are rejected under 35 U.S.C. 103(a) as being unpatentable by **Te-eni** in view of **Nelson** (Context-Aware and Location System, dissertation for Doctor of Philosophy, University of Cambridge, January 1998).

Regarding claims **4, 51, 56, Te-eni** discloses all the claimed limitations, see claim **5** above, except for a hierarchical traversable tree structure associated with phone context.

However, since the use of hierarchical traversable tree structure is well known in the art of computer database as disclosed by **Nelson** (see section 2.2.2 Hierarchical Location management), it would have been obvious to one of ordinary skill in the art to provide the above teaching of **Nelson** to **Te-eni** for using a hierarchical traversable tree structure as claimed, in order to traverse effectively from one mode to another mode, for setting the phone to operate according to the instructed mode.

Regarding claims **52-53**, the claims are rejected for the same reason as set forth in claim **51** above. In addition, **Te-eni** further discloses

- configured to receive multiple different context providers (i.e, hospital, airplane, cinema halls, see col. 3, lines 22-28);

- information pertains to a user of the cellular phone (see Table 1, and col. 13, line 22 - col. 14, line 6).

Response to Arguments

11. Applicant's arguments filed 7/7/03 have been fully considered but they are not persuasive.

As to claims 5, 6, 15, Applicant argues that **Te-eni** fails to tach or suggest a cellular phone and fails to teach or suggest the cellular phone configured to determine a phone context, Applicant's attention is directed to Figures 1-2 in **Te-eni**'s reference which illustrates a mobile unit and a cellular base-station tower, which implicitly implies that such mobile unit is a cellular phone. Further, Applicant's attention is directed to col. 21, lines 1-4, which discloses that "the mobile handset's operating software can be further **configured** to perform action upon receiving **commands** from a local management system..... Such commands may include speaker mute, MS shut down ....", wherein it is clear that the "commands" would read on the "context" as claimed,

in order to perform certain action upon receiving commands, it is clear that the operating software must be able to determine the context in order to modify the behavior of the mobile unit.

As to claims 17, 24 regarding the limitation of "ascertain its location", Applicant's attention is directed to col. 10, line 27 - col. 12, line 1, wherein **Te-eni** discusses different methods for location calculation, and further mention that "any other sufficiently accurate location method can be utilized" in col. 12, line 1. Although **Te-eni** fails to disclose the step of ascertain its location from multiple location information, such step is known in the art as disclosed by **Kuwahara** (see Boolean operation result of the combination means in **col. 8, lines 1-28**). Here, since **Te-eni** does suggests that "any other sufficiently accurate location method can be utilized, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of **Kuwahara** to **Te-eni** for the mobile phone to use different forms of location information for ascertain its location, for improving location information accuracy.

As to claim 29, Applicant argues that **Te-eni** fails to tach or suggest transmitting information that is associated with a location type that has attributes that define a cellular phone behavior, Applicant's attention is directed to col. 13, line 22 - col. 14, line 9 and col. 21, line 1-4), it is clear that when a user is located within a hospital or concert hall, services are denied and a command such as "MS shut down" is transmitted to the mobile, such command message "MS shut down" is the information **associated** with the location type (i.e, hospital or concert) and the "MS shut down" is also the attribute of the location type as claimed.

As to claims 31, 36, 41, 42 regarding the limitation "information **pertaining** to one or more class types (hospital) .... associated with various attributes that define the behavior of cellular phone", Applicant's attention is directed to pages 190-201 in **Kovac**'s reference, wherein **Kovac** discloses a method for mobile access to context-aware service (see pp. 190-201), wherein based on location awareness information, the behavior of a mobile's user's preferences is

modified (i.e, phone setting) depend on environments (hospital or theater) at such location (see col. 2 of page 190 on silent vibration in a concert), and user profile (see section 3.3 Customizable Application, page 192). Here, the environments such as hospital or theater would read on "class types" as claimed, the call alerting modes or phone settings would read on "attributes associated with the class types" as claimed.

As to claim 48, Applicant's argument on page 36 argues that every embodiment taught by **Kuwahara** involves "call answer options" and relies on a Personal Number Server 41, the Examiner disagrees with the Applicant with such allegation. It is noted that Kuwahara discloses an embodiment in that the user of the mobile terminal can set a call incoming mode so that the selected mode is executed automatically depending on the location of the user (see col. 10, lines 36-40). Here, since no call diversion is activated in setting a call **incoming** mode, it is believe that neither "call answer options" nor Personal Number Server would be involved as alleged by the Applicant.

As to claim 50, regarding the limitation of "hierarchical structure", Applicant's attention is directed to Fig. 21 of **Kuwahara**'s reference, wherein area vector names (home, office) are hierarchical information of location informations (zones A and B). Since the use of hierarchical traversable tree structure is well known in the art of computer database, it would have been obvious to one of ordinary skill in the art to further modify **Kuwahara** for using a hierarchical traversable tree structure as claimed, in order to traverse effectively from one mode to another mode, for setting the phone to operate according to the instructed mode.

As to claim 51, 54 regarding the limitation of "hierarchical structure", since the use of hierarchical traversable tree structure is well known in the art of computer database as disclosed by **Nelson** (see section 2.2.2 Hierarchical Location management), it would have been obvious to one of ordinary skill in the art to provide the above teaching of **Nelson** to **Te-eni** for using a hierarchical traversable tree structure as claimed, in order to traverse effectively from one mode to another mode, for setting the phone to operate according to the instructed mode.

As to claims 58, the same argument is applied for the same reason as set forth in claim 17 above regarding the limitation of "ascertain its location".

For foregoing reasons, the examiner believes that the pending claims are not allowable over the cited prior art.

Double Patenting

12. Claims 2-27, 29-48, 50-58 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-53 of U.S. Patent No.6,327,535 to **Evans** et al in view of **Kovacs** ("Adaptive Mobile Access to Context-aware Service", IEEE 1999, pp. 190-201). .

As to claims 2-27, 29-48, 50-58, **Evans** discloses all the claimed limitations (see claims 1-53) except for modifying the behavior of a cellular phone based on a received context information. However, **Kovac** discloses a method for mobile access to context-aware services (see pp. 190-201), wherein based on location awareness information, the behavior of a mobile's user's preferences is modified (i.e, phone setting) depend on environments (read on class types such as hospital, theater) at certain locations (see col. 2 of page 190 on silent vibration in a concert), and user profile (see section 3.3 Customizable Application, page 192). Therefore, it would have been obvious to one of ordinary skill in the art to provide the above teaching of **Kovac** to **Evans**, for modifying the behavior of a mobile device (cellular phone) according to its location at certain environments.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. **Any response to this final action should be mailed to:**

Box A.F.

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for formal communications intended for entry)

(for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Sixth Floor (Receptionist).

Any inquiry concerning this communication or communications from the examiner should be directed to Duc M. Nguyen whose telephone number is (703) 306-4531, Monday-Thursday (9:00 AM - 5:00 PM). Or to Edward Uban (Supervisor) whose telephone number is (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Duc M. Nguyen 

Sept 11, 2003